# CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

**NABL** - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377


Job No.: CTCE/BBMP/W.No.09/KVS/CSR-07/104a/CEMENT/2016-17 Date: 30.07.2016

## TEST REPORT ON CEMENT

| | | |
|---|---|---|
| * CUSTOMER | : | **Asst. Executive Engineer**, Vidyaranyapura Sub Division, BBMP, Bangalore. |
| *AGENCY | : | **Mr. K.V. Subbareddy,** #106/B, Ashwathnagara, RMV 2nd Stage, Bangalore – 94. |
| *NAME OF THE WORK | : | Emergency works (Construction of culverts and other works) in Ward No.09 of Vidyaranyapura Sub Division, BBMP, Bangalore. |
| *REFERENCE | : | EE/BTP/BBMP/E-PMT/81/2016-17 Dated: 27.07.2016 |
| SAMPLE ID | : | Cement |
| SAMPLE RECEIVED ON | : | 28.07.2016 |
| PERIOD OF TESTING | : | 28.07.2016 to 30.07.2016 |

The results of the tests conducted on the cement sample are as follows:

| Sl. No | Descriptions | Test Method as per IS | Test Result | Requirements as per IS: 8112-2013 |
|---|---|---|---|---|
| 1 | Standard Consistency | IS-4031 (Part -4) 1988(RA-2009) | 28.00 % | - |
| 2 | a) Initial Setting Time | IS-4031 (Part -5) 1988(RA-2009) | 135 Minutes | Not Less than 30 Minutes |
| | b) Final Setting Time | IS-4031 (Part -5) 1988(RA-2009) | 480 Minutes | Not More than 600 Minutes |
| 3 | Soundness by Le Chartlier Method | IS-4031 (Part-3) 1988(RA-2009) | 1 mm | Not more than 10mm |

*Information is furnished by the Customer/Representative.

Note:

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⇒ Any Query regarding the report must be reported within 30 days from the date of testing.

*********

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Quality Manager

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T-2377


Job No.: CTCE/BBMP/W.No.09/KVS/CSR-07/104a/SAND-Gradation/2016-17 : 30.07.2016

## TEST REPORT ON DETERMINATION GRADATION OF FINE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. K.V. Subbareddy,**
#106/B, Ashwathnagara, RMV 2nd Stage, Bangalore – 94.

*** Name of Work** : Emergency works (Construction of culverts and other works) in Ward No.09 of Vidyaranyapura Sub Division, BBMP, Bangalore.

**Reference** : EE/BTP/BBMP/E-PMT/81/2016-17 Dated: 27.07.2016

**Technical Reference** : IS : 2386 Part 1 - 1963 RA-2007

**Sample ID** : Fine Aggregates

**Sample Received on** : 28.07.2016

**Date of Testing** : 30.07.2016

Total Wt. of Aggregates in gms **1000**

| Is Sieve Size in mm | Cumulative Weight Passing in % | Specific Limits as per IS 383-1970 (RA- 2007) | | | |
|---|---|---|---|---|---|
| | | Zone-I | Zone-II | Zone-III | Zone-IV |
| 10 | 100 | 100 | 100 | 100 | 100 |
| 4.75 | 95.00 | 90-100 | 90-100 | 90-100 | 95-100 |
| 2.36 | 76.50 | 60-95 | 75-100 | 85-100 | 95-100 |
| 1.18 | 54.70 | 30-70 | 55-90 | 75-100 | 90-100 |
| 600 Micron | 25.70 | 15-34 | 35-59 | 60-79 | 80-100 |
| 300 Micron | 12.20 | 5-20 | 8-30 | 12-40 | 15-50 |
| 150 Micron | 4.20 | 0-10 | 0-10 | 0-10 | 0-15 |

* Information is furnished by the Customer/Representative

**Remarks :** This sample is under Zone-I specific limits.

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Job No.: CTCE/BBMP/W.No.09/KVS/CSR-07/104a/AGG/GR/2016-17 : 30.07.2016

## TEST REPORT ON DETERMINATION GRADATION OF COARSE AGGREGATES

| | |
|---|---|
| * Customer | : **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore. |
| * Agency | : **Mr. K.V. Subbareddy,** #106/B, Ashwathnagara, RMV 2nd Stage, Bangalore – 94. |
| * Name of Work | : Emergency works (Construction of culverts and other works) in Ward No.09 of Vidyaranyapura Sub Division, BBMP, Bangalore. |
| Reference | : EE/BTP/BBMP/E-PMT/81/2016-17 Dated: 27.07.2016 |
| Technical Reference | : IS : 2386 Part 1 -1963 RA-2007 |
| Sample ID | : Coarse Aggregates (40mm) |
| Sample Received on | : 28.07.2016 |
| Date of Testing | : 30.07.2016 |

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Total Wt. of Aggregates in gms= **7000**

| Is Sieve Size in mm | Cumulative Weight Passing in % | Specific Limits as per IS 383-1970 (RA- 2007) | |
|---|---|---|---|
| | | Graded | Single Sized |
| 80 | 100 | 100 | - |
| 63 | 100 | - | 100 |
| 40 | 98.07 | 95-100 | 85-100 |
| 20 | 36.57 | 30-70 | 0-20 |
| 10 | 14.79 | 10-35 | 0-5 |
| 4.75 | 2.64 | 0-5 | - |

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**Remarks :** This sample is under Graded specific limits.

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Job No.: CTCE/BBMP/W.No.09/KVS/CSR-07/104a/CUBE/2016-17 29.08.2016

## TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

*** Customer** : **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. K.V. Subbareddy,** #105/B, Ashwathnagara, RMV 2nd Stage, Bangalore – 94.

*** Name of the work** : Emergency works (Construction of culverts and other works) in Ward No.09 of Vidyaranyapura Sub Division, BBMP, Bangalore.

*** Reference** : EE/BTP/BBMP/E-PMT/81/2016-17 Dated: 27.07.2016

*** Sample ID** : Pavement Concrete

**Size of cubes** : 150mmx150mmx150mm

**Cross Sectional Area** : 22500 $mm^2$

**Technical Reference** : IS: 516-1959 (Reaffirmed 2008)

*** Grade of Concrete** : $M_{20}$

**Compressive Strength as on** : 28th day

**Sample Received on** : 29.08.2016

| Sl.No. | * Date of casting | Date of testing | Weight of cube (Kg) | Failure load (KN) | Compressive strength ($N/mm^2$) |
|---|---|---|---|---|---|
| 1 | 01.08.2016 | 29.08.2016 | 8.112 | 489.6 | 21.76 |
| 2 | 01.08.2016 | 29.08.2016 | 8.259 | 502.6 | 22.34 |
| 3 | 01.08.2016 | 29.08.2016 | 8.326 | 516.3 | 22.95 |

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Job No.: CTCE/BBMP/W.No.09/KVS/CSR-07/104a/CUBE/2016-17 29.08.2016

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*** Reference** : EE/BTP/BBMP/E-PMT/81/2016-17 Dated: 27.07.2016

*** Sample ID** : Pavement Concrete

**Size of cubes** : 150mmx150mmx150mm

**Cross Sectional Area** : 22500 $mm^2$

**Technical Reference** : IS: 516-1959 (Reaffirmed 2008)

*** Grade of Concrete** : $M_{20}$

**Compressive Strength as on** : 28th day

**Sample Received on** : 29.08.2016

| Sl.No. | * Date of casting | Date of testing | Weight of cube (Kg) | Failure load (KN) | Compressive strength ($N/mm^2$) |
|---|---|---|---|---|---|
| 1 | 01.08.2016 | 29.08.2016 | 8.182 | 489.3 | 21.75 |
| 2 | 01.08.2016 | 29.08.2016 | 8.290 | 512.2 | 22.76 |
| 3 | 01.08.2016 | 29.08.2016 | 8.310 | 514.3 | 22.86 |

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*** Reference** : EE/BTP/BBMP/E-PMT/81/2016-17 Dated: 27.07.2016

*** Sample ID** : Pavement Concrete

**Size of cubes** : 150mmx150mmx150mm

**Cross Sectional Area** : 22500 $mm^2$

**Technical Reference** : IS: 516-1959 (Reaffirmed 2008)

*** Grade of Concrete** : $M_{20}$

**Compressive Strength as on** : 28th day

**Sample Received on** : 29.08.2016

| Sl.No. | * Date of casting | Date of testing | Weight of cube (Kg) | Failure load (KN) | Compressive strength ($N/mm^2$) |
|---|---|---|---|---|---|
| 1 | 01.08.2016 | 29.08.2016 | 8.120 | 478.3 | 21.26 |
| 2 | 01.08.2016 | 29.08.2016 | 8.263 | 492.6 | 21.89 |
| 3 | 01.08.2016 | 29.08.2016 | 8.382 | 503.6 | 22.38 |

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**Technical Reference** : IS: 516-1959 (Reaffirmed 2008)

*** Grade of Concrete** : $M_{20}$

**Compressive Strength as on** : 28th day

**Sample Received on** : 29.08.2016

| Sl.No. | * Date of casting | Date of testing | Weight of cube (Kg) | Failure load (KN) | Compressive strength ($N/mm^2$) |
|---|---|---|---|---|---|
| 1 | 01.08.2016 | 29.08.2016 | 8.097 | 503.7 | 22.39 |
| 2 | 01.08.2016 | 29.08.2016 | 8.189 | 513.8 | 22.84 |
| 3 | 01.08.2016 | 29.08.2016 | 8.290 | 517.6 | 23.00 |

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